In the Claims:

Substitute the following amended claims for pending claims with the same number.

1. (Amended) A point to point facility transport system for the symmetrical bidirectional transport of 100BaseTX Ethernet frame data over N copper wire pairs connecting a central office facility to a customer premise, comprising:

N downstream transmission paths for transporting a single 100BaseTX Ethernet signal from the central office facility to the customer premise, each downstream transmission path operative to transport a 25 Mbps data stream;

N upstream transmission paths for transporting a single 100BaseTX Ethernet signal from the customer premise to the central office facility, each upstream transmission path operative to transport a 25 Mbps data stream;

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first modem means located at the central office facility and coupled to one end of said N downstream transmission paths and one end of said N upstream transmission paths;

second modem means located at the customer premises and coupled to the other end of said N downstream transmission paths and the other end of said N upstream transmission paths;

wherein said first modem means and said second modem means are operative to place onto and receive from said N copper wire pairs, data frames encapsulating said 100BaseTX Ethernet frame data; and

wherein N is a positive integer in the range of one to four.

4. (Amended) The facility transport system according to claim 1, wherein said first modem means and said second modem means further comprise:

a physical layer module for performing physical layer functions for 100BaseTX Ethernet;

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a data splitter adapted to divide a received 100BaseTX Ethernet data stream into N 25 Mbps output data streams, each output data stream destined for a transmitter;

N transmitters for coupling said N 25 Mbps output data streams to said N copper wire pairs, each transmitter adapted to modulate one of said 25 Mbps output data streams to generate a transmit signal therefrom suitable for transmission onto one of said N copper wire pairs;

N receivers for coupling to said N copper wire pairs, each receiver adapted to demodulate a 25 Mbps signal received from one of said N copper sire pairs so as to generate a receive data signal therefrom; and

a data collector adapted to receive said N 25 Mbps receive data signals from said N receivers and to combine and reorganize said N 25 Mbps receive data signals into a single 100 Mbps data stream for output as a 100BaseTX compatible signal.

6. (Amended) A point to point facility transport system for the symmetrical bidirectional transport of 100BaseTX Ethernet frame data and plain old telephone service (POTS) over N copper wire pairs connecting a central office facility to a customer premise, comprising:

N downstream transmission paths for transporting a single 100BaseTX Ethernet signal and POTS transmitted from the central office facility destined to the customer premise, each downstream transmission path operative to transport a 25 Mbps data stream;

N upstream transmission paths for transporting a single 100BaseTX Ethernet signal and POTS transmitted from the customer premise destined to the central office facility, each upstream transmission path operative to transport a 25 Mbps data stream;

first modem means located at the central office facility and coupled to one end of said N downstream transmission paths and one end of said N upstream transmission paths;

second modem means located at the customer premises and coupled to the other end of said N downstream transmission paths and the other end of said N upstream transmission paths;

first splitter means coupled to said first modem means and to said N copper wire pairs;

second splitter means coupled to said second modem means and to said N copper wire pairs;

wherein said first modem means and said second modem means are operative to place onto and receive from said N copper wire pairs data packets encapsulating 100BaseTX Ethernet frame data;

wherein said first splitter means and said second splitter means are operative to combine and split said POTS and N downstream and N upstream transmission path signals; and

wherein N is a positive integer in the range of one to four.

9. (Amended) The facility transport system according to claim 6, wherein said first modem means and said second modem means further comprise:

a physical layer module for performing physical layer functions for 100BaseTX Ethernet, said physical layer module operative to communicate over a Media Independent Interface (MII) bus;

a data splitter adapted to divide the MII data stream into N output data streams, each output data stream destined for a transmitter;

N transmitters for coupling to said N copper wire pairs, each transmitter adapted to modulate one of said data streams output of said data splitter so as to generate a 25 Mbps transmit signal therefrom suitable for transmission onto one of said N copper wire pairs;

N receivers for coupling to said N copper wire pairs, each receiver adapted to demodulate a 25 Mbps signal received from one of said N copper sire pairs so as to generate a receive data signal therefrom; and

a data collector adapted to receive said N receive data signals from said N receivers and to combine and reorganize said N receive data signals into a single data stream for output via said physical layer module in a form compatible with 100BaseTX.

10. (Amended) A point to point facility transport system for the symmetrical bidirectional transport of 100BaseTX Ethernet frame data over N copper wire pairs connecting a central office facility to a customer premise, comprising:

N downstream transmission paths for transporting a single 100BaseTX Ethernet signal from the central office facility to the customer premise, each downstream transmission path operative to transport a 25 Mbps data stream;

N upstream transmission paths for transporting a single 100BaseTX Ethernet signal from the customer premise to the central office facility, each upstream transmission path operative to transport a 25 Mbps data stream;

switch means located at the central office facility and coupled to one end of said N downstream transmission paths and one end of said N upstream transmission paths;

a network element located at the customer premises and coupled to the other end of said N downstream transmission paths and the other end of said N upstream transmission paths;

wherein said switch means and said network element are operative to place onto and receive from said N copper wire pairs data frames encapsulating 100BaseTX Ethernet frame data; and

wherein N is a positive integer in the range of one to four.

13. (Amended) The facility transport system according to claim 10, wherein said switch means and said network element further comprise:

a physical layer module for performing physical layer functions for 100BaseTX Ethernet;

a data splitter adapted to divide a received 100BaseTX Ethernet stream into N 25 Mbps output data streams, each output data stream destined for a transmitter;

N transmitters for coupling said N 25 Mbps output data streams to said N copper wire pairs, each transmitter adapted to modulate one of said 25 Mbps output data streams to generate a transmit signal therefrom suitable for transmission onto one of said N copper wire pairs;

N receivers for coupling to said N copper wire pairs, each receiver adapted to demodulate a 25 Mbps signal received from one of said N copper sire pairs so as to generate a 25 Mbps receive data signal therefrom; and

a data collector adapted to receive said N 25 Mbps receive data signals from said N receivers and to combine and reorganize said N 25 Mbps receive data signals into a single 100 Mbps data stream for output as a 100BaseTX compatible signal.

Kindly add new claims 16-17

16. (New) A method of transporting symmetric bidirectional 100 Mbps Ethernet over telecommunications copper infrastructure, said method comprising the steps of:

splitting a single 100BaseTX Ethernet received from a user into N separate 25 Mbps upstream data signals;

generating a separate upstream DSL signal from each of said N 25 Mbps upstream data signals;

transmitting each DSL upstream signal over a separate copper twisted pair wire;

receiving N downstream DSL signals, each downstream 100BaseS DSL signal received over a separate copper twisted pair wire;

generating a separate 25 Mbps downstream data signal from each received downstream DSL signal; and

combining said N downstream data signals into a single 100BaseTX compatible Ethernet signal for transmission to said user; and

wherein N is a positive integer in the range of one to four.

17. (New) A modem for symmetric bi-directional transporting of 100BaseTX Ethernet over a telecommunications copper infrastructure, comprising:

a PHY circuit adapted to receive and transmit 100BaseT Ethernet signals;

a data splitter adapted to split a received 100 Mbps Ethernet stream into four 25 Mbps data upstream signals;

four DSL ports coupled to said data splitter and adapted to generate four separate upstream DSL signals from said four 25 Mbps data upstream signals, each upstream DSL signal coupled to one of four copper twisted pair wires;

said four DSL ports further adapted to receive four downstream DSL signals and to generate four 25 Mbps downstream signals, each 25 Mbps downstream signal received over a separate copper twisted pair wire; and

a data collector coupled to said four DSL ports and adapted to combine said four 25 Mbps downstream signals into a single 100 Mbps Ethernet signal for transmission by said PHY circuit.